



Heartland Environmental Associates, Inc.

**ASBESTOS BUILDING INSPECTION
REPORT**

**Former Carrier-Bryant Manufacturing Corporation
Facility Buildings
1100 West 21st Street & 1139 West 23rd Street
Indianapolis, Indiana 46208**

January 03, 2011

“Your dependable partner for environmental compliance”

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This report is prepared by:

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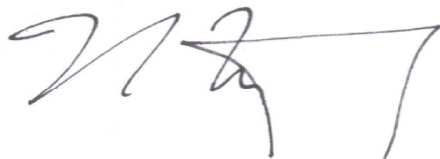
Prepared for:

The City of Indianapolis
Department of Metropolitan Development
200 East Washington Street
Suite 2042
Indianapolis, Indiana 46204-3328

For the Site:

Former Carrier-Bryant Manufacturing Corporation
1100 West 21st Street and 1139 West 23rd Street
Indianapolis, Indiana

Report prepared by:



Nivas R. Vijay, CHMM
Heartland Environmental Associates, Inc.

01/03/2011

Date

Heartland Environmental Associates, Inc.

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EXECUTIVE SUMMARY

Heartland Environmental Associates, Inc. (Heartland), on behalf of Blue Sky Engineering, Inc. (Blue Sky) conducted an asbestos building inspection of the former Carrier/Bryant Manufacturing Corporation facility buildings located at 1100 West 21st Street and 1139 West 23rd Street in Indianapolis, Indiana. The assessment area consisted of five, one to two story former manufacturing and warehouse buildings. The assessment areas totaled approximately 445,300 square feet of space.

Based upon the results of the asbestos building inspection, **asbestos-containing materials (ACMs) were encountered. These materials included: 1) thermal system insulation (TSI) in the form of pipe wrap and mudded joint insulation wrapping, which is a regulated ACM (RACM), 2) boiler tank insulation materials, which is a RACM, 3) cement piping material, which is a RACM, 4) resilient flooring materials and associated mastics, which are classified as Category I, non-friable ACM, 5) ceiling and wall plaster, which are classified as a Category II, non-friable ACM, and 6) fire doors and transite paneling, which are classified as Category II, non-friable ACM.**

It is the understanding of Heartland that the building will either be renovated or demolished, meeting the definition of renovation and demolition, in accordance with the National Emission Standards for Hazardous Air Pollutant (NESHAP) for the State of Indiana. RACM (TSI) was identified in quantities greater than the written notification requirements (>260 linear feet) specified in Indiana Administrative Code (326 IAC 14-10). **As such, written notification must be submitted to the Indiana Department of Environmental Management (IDEM) at least ten (10) working days prior to any future planned renovation/demolition activities.**

1.0 INTRODUCTION

Heartland, on behalf of Blue Sky, received written authorization from the City of Indianapolis Department of Metropolitan Development (City) to conduct an asbestos building inspection of the former Carrier/Bryant Manufacturing Corporation facility buildings, located at 1100 West 21st Street and 1139 West 23rd Street in Indianapolis, Indiana. The purpose of the inspection was to identify ACMs. A site location map has been provided as Figure 1.

The assessment area consisted of five separate former manufacturing and warehouse buildings encompassing approximately 445,300 square feet of space. The first building, Building 2, encompassed approximately 220,000 square feet and consisted of a one to two story building with steel and wood frame construction with a brick and concrete façade. The building was constructed on a concrete foundation. The roof was constructed of built up asphalt tar over top wooden decking. Rubber membrane material covered the roof in certain locations. The building interior was segmented primarily with cinder block and brick walls, with areas of plaster over walls on the second floor. Concrete floors cover the building with areas of resilient vinyl flooring covering portions of the first and second levels.

Directly east of Building 2 were two smaller utility buildings. The first utility building, the Boiler House, encompassed approximately 3,300 square feet and consisted of a brick frame with a brick and concrete façade. The building was constructed on a concrete foundation. The roof was constructed of built up asphalt tar over top steel decking. The second utility building, the Paint Pump House, encompassed approximately 3,000 square feet and consisted of wood frame construction with a brick and concrete façade. The building was constructed on a concrete foundation. The roof was constructed of built up asphalt tar over top wooden decking.

Northeast of Building 2 were two larger former manufacturing and warehousing buildings. The first building, Building 3, encompassed approximately 99,000 square feet and consisted of a one story building with steel frame construction with a brick and concrete façade. The building was constructed on a concrete foundation. The roof was constructed of built up asphalt tar over top steel decking. Concrete floors cover the building with areas of resilient vinyl flooring over top portions of the concrete. Adjoining Building 3 to the west was Building 5. Building 5 was similarly constructed as Building 3 and encompassed approximately 120,000 square feet. The building consisted of a one story building with steel frame construction with a brick and concrete façade. The building was constructed on a concrete foundation. The roof was constructed of built up asphalt tar over top steel decking. Rubber membrane material covered the roof in certain locations. Concrete floors cover the building with areas of resilient vinyl flooring over top portions of the concrete.

It should be noted that the building identification numbers utilized in this report are those referenced in documentation provided by the City. A site map depicting the assessment area and building locations with identification numbers is included as Figure 2.

Reasonable efforts were made to identify suspect ACM within the facility inspected. Heartland acted on the understanding that the building would be either renovated or demolished; therefore the inspection was performed using “destructive” sampling methods. The manner of the inspection did not compromise the structural integrity of the buildings or endanger the safety of sampling personnel or other contractors/occupants.

2.0 METHODOLOGY

On December 6 and December 7, 2010, Mr. Nivas R. Vijay, Project Manager with Heartland completed the inspection of the facility. Mr. Vijay is an accredited asbestos building inspector in the State of Indiana (License# 197004016). A Copy of Mr. Vijay's Certificate of Asbestos Accreditation has been provided for review in Appendix A. As part of the inspection, Heartland performed the following activities:

- Inspected the construction materials of the building;
- Obtained bulk samples for laboratory analysis; and
- Completed a report documenting Heartland's findings.

Based on Heartland's visual assessment of the facility, several types of building materials were considered non-suspect ACMs and therefore were not sampled. These materials include: concrete floors, brick and block, metal fixtures, wood and plywood materials, fiberglass insulation and ceramic tiles.

Based on Heartland's visual inspection, two types of building materials were assumed to be ACM:

- TSI (thermal system pipe wrap insulation) and mudded insulation on pipe joints were present on vertical and horizontal pipes located throughout the first floor and mezzanine level of Building 2. Additionally, TSI and boiler insulation was located on piping and strewn on the ground throughout the Boiler House building.
- Fire doors were located in entryways in both Building 2 and Building 5.
- Resilient vinyl flooring material (both 9" x 9" and 12" x 12") including associated mastic material located in various sections throughout the first floor and mezzanine level of Building 2. Heartland located numerous floor tile packaging materials and samples which identified the floor tiles located within Building 2 as containing asbestos.

Heartland identified 16 homogeneous areas of suspect ACMs within the five buildings. The suspect materials were assessed based on condition of the material and friability (the ability to be crumbled or turned to dust by hand pressure). Heartland utilized disposable nitrile gloves while obtaining samples. The samples were then placed into pre-labeled sealable bags. Further definitions and information on sampling analysis and strategies are included in Appendix B.

Following collection of the samples, Heartland transported the samples under Heartland chain of custody to ACM Engineering and Environmental Services, a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory, in South Bend, Indiana. The materials sampled were submitted for Polarized Light Microscopy (PLM) analysis, with the laboratory estimating the percent asbestos by visual inspection. Materials defined as ACM are those that

contain greater than 1% asbestos. Materials that are not friable and contain less than 1% asbestos are not considered to be ACM. In two samples (B-5/FT-1A and B-5/FT-2A), PLM results indicated the samples each contained 3% asbestos. In order to more accurately determine if this material was an ACM, the material was point counted. Point count results determined the samples did not contain asbestos.

3.0 SAMPLE LOCATIONS AND FINDINGS

3.1 Description of Sample Locations

Heartland personnel obtained 22 bulk samples from 16 homogeneous areas of suspect materials for laboratory analysis. These sampled materials consisted of 2 types of ceiling tile, 1 type of cove base material with associated mastic, 1 type of drywall material, 1 type of insulation material, 3 types of resilient vinyl flooring material with associated mastic, 4 types of asphalt roofing material, 1 type of cement piping material, 2 types of plaster material and 1 type of wallboard material. Site layout maps depicting sample locations are provided as Figure 3 and Figure 4.

3.2 Findings

Both friable and Category I and II non-friable ACMs were identified during the site inspection. These materials consisted of TSI pipe wrap and mudded insulation on pipe joints, cement piping material, resilient flooring materials and associated mastics, ceiling and wall plaster, fire doors and transite paneling. The TSI and plaster materials are considered friable and thus RACM. The flooring materials and associated mastics and roofing materials are considered Category I, non-friable materials and fire doors and transite are considered Category II non-friable materials and are not typically regulated unless they are subjected to sanding, grinding, abrading, or cutting during renovation or removal.

The TSI was located on vertical and horizontal pipe runs throughout the first floor and mezzanine levels in Building 2 and within the Boiler House building. Some of the TSI pipe run was identified amidst sections of fiberglass pipe insulation. In several areas, piping had been replaced with newer fiberglass insulation. TSI pipe run was easily identifiable amidst this newer pipe insulation. Numerous pipe connections were also identified with mudded asbestos joints throughout these sections.

Cement piping material was identified in piping debris and vertical and horizontal pipe runs in Building 5. Approximately 1,500 square feet of ceiling and wall plaster was located in the southern portion of the mezzanine level of Building 2. Additionally, approximately 420 square feet of transite wallboard was observed in the northern portion of Building 2.

A total of 4 fire doors were observed throughout Building 2. An additional 3 fire doors were observed in the northwestern portion of Building 5.

Approximately 26,000 square feet of resilient vinyl flooring material was observed throughout the first floor and mezzanine levels of Building 2. These consisted primarily of 9" x 9" flooring material located on all floors; however some areas of 12" x 12" flooring material were observed. Heartland encountered numerous boxes of unused resilient flooring materials and other flooring material sample swatches located in a storage area within Building 2. These sample swatches and boxes

identified the resilient flooring materials as containing asbestos. As such, flooring materials in Building 2 were not sampled and are assumed to be ACM.

A copy of the laboratory's Certificate of Analysis is provided in Appendix C. Table 1 below provides a summary of the materials sampled, as well as the presumed ACM.

Table 1 Summary of Sampled Building Materials Former Carrier/Bryant Manufacturing Corporation Buildings 1100 West 21st Street and 1139 West 23rd Street Indianapolis, Indiana December 06 and December 07, 2010					
Material/Location	Friable	Category	Asbestos Content	Area (ft²)*	Sample #
Building 2					
Ceiling Tile – 2' x 2' white w/ squiggle design, southwest office area in Mezzanine Level (Note: large quantities of fiberglass and Styrofoam ceiling tile observed in building; these tiles were not sampled as part of this inspection)	Yes	-	ND	~150	B-2/CT-1A
Insulation – white, in between plaster walls, southwest office area in Mezzanine Level	No	-	ND	~300	B-2/INS-1
Plaster, ceiling and walls, southern office area in Mezzanine Level	Yes	II	28% Chrysotile	~1,500	B-2/PL-1(A-C)
Asphalt Roofing Material	No	I	ND	~150,000	B-2/Roof-1
Transite Wallboard Material, northern portion of building	No	II	39% Chrysotile	~420	B-2/WB-1A
Resilient vinyl flooring and associated mastics, 9" x 9" and 12" x 12" in varying designs located throughout Mezzanine Level office spaces and in portions of the First Floor	No	I (Mastic Only)	PACM	~26,000	Not Sampled

Table 1 Summary of Sampled Building Materials Former Carrier/Bryant Manufacturing Corporation Buildings 1100 West 21st Street and 1139 West 23rd Street Indianapolis, Indiana December 06 and December 07, 2010					
Material/Location	Friable	Category	Asbestos Content	Area (ft²)*	Sample #
Pipe insulation on vertical and horizontal ceiling pipe runs throughout First Floor and Mezzanine Level Note: pipe insulation predominately 2" and 4" in diameter.	Yes	-	PACM	~8,045 Linear Feet	Not Sampled
Mudded Joint Covering at Pipe Connections throughout First Floor and Mezzanine Level Note: mudded joints range in diameter from 2" to 4"; most joints 2" to 3" in size	Yes	-	PACM	**	Not Sampled
Fire Doors – 4 Fire Doors identified in northern entryway within the building	No	II	PACM	-	Not Sampled
Building 3					
Cove Base + Mastic, 4" brown, in office area	No	I (Mastic Only)	ND	~25	B-3/CB-1A
Ceiling Tile – 2' x 4' white w/ squiggle design, in office area	No	-	ND	~40	B-3/CT-1A
Floor Tile/Mastic – 9" x 9" off-white, western end of the building	No	I (Mastic Only)	ND	~80	B-3/FT-1A
Cement Piping Material, on vertical pipe runs and in piping debris throughout building	Yes	-	37% Chrysotile	~500 Linear Feet	B-3/Pipe-1
Building 5					
Drywall, in office area	Yes	II	ND	~60	B-5/DW-1A
Floor Tile/Mastic – 12" x 12" off-white, utility room in southern portion of the building	No	I (Mastic Only)	ND	~600	B-5/FT-1(A-C)
Floor Tile/Mastic – 12" x 12" greenish white, in office area	No	I (Mastic Only)	ND	~900	B-5/FT-2(A-C)

Table 1 Summary of Sampled Building Materials Former Carrier/Bryant Manufacturing Corporation Buildings 1100 West 21st Street and 1139 West 23rd Street Indianapolis, Indiana December 06 and December 07, 2010					
Material/Location	Friable	Category	Asbestos Content	Area (ft²)*	Sample #
Asphalt Roofing Material	No	I	ND	~120,000	B-5/Roof-1
Asphalt Roofing Material	No	I	ND	~120,000	B-5/Roof-2
Fire Doors – 3 Fire Doors identified in northwestern portion of the building	No	II	PACM	-	Not Sampled
Paint Pump House Building					
Plaster, on interior walls in northern portion of the building	Yes	II	ND	~50	B-PP/PL-1A
Asphalt Roofing Material	No	I	ND	~3,000	B-PP/Roof-1
Boiler House Building					
Pipe insulation on vertical and horizontal ceiling pipe runs throughout building and discarded/strewn throughout the floor of the building adjacent to old boilers	Yes	-	PACM	***	Not Sampled
Friable: Yes – hand friable, No – non-friable ND: No asbestos detected *Square footage estimates determined from site reconnaissance and site maps obtained during site reconnaissance ** Note mudded joint linear footage estimate included with total estimate of TSI *** Quantity of insulation difficult to ascertain due to vandalized state of the building. It is assumed that quantities of these materials exist above NESHAP regulated limits for notification purposes.					

4.0 CONCLUSIONS AND RECOMMENDATIONS

Heartland conducted an asbestos building inspection of the former Carrier/Bryant Manufacturing Corporation facility buildings located at 1100 West 21st Street and 1139 West 23rd Street in Indianapolis, Indiana. The assessment area consisted of five, one to two story former manufacturing and warehouse buildings. The assessment areas totaled approximately 445,300 square feet of space.

Based upon the results of the asbestos building inspection, **ACMs were encountered. These materials included: 1) TSI in the form of pipe wrap and mudded joint insulation wrapping, which is a RACM, 2) boiler tank insulation materials, which is a RACM, 3) cement piping material, which is a RACM, 4) resilient flooring materials and associated mastics, which are classified as Category I, non-friable ACM, 5) ceiling and wall plaster, which are classified as a Category II, non-friable ACM, and 6) fire doors and transite paneling, which are classified as Category II, non-friable ACM.**

Due to heavy vandalism, both RACM and assumed ACM have been disturbed and are strewn throughout portions Building 2 and the former Boiler House building amidst discarded refuse and debris. Due to the disturbance of these materials, Heartland recommends that these buildings be properly secured and only accessed by properly trained and licensed asbestos personnel donning proper personal protective equipment (PPE).

It is the understanding of Heartland that the building will either be renovated or demolished, meeting the definition of renovation and demolition, in accordance with the NESHAP for the State of Indiana. RACM (TSI) was identified in quantities greater than the written notification requirements (>260 linear feet) specified in Indiana Administrative Code (326 IAC 14-10). **As such, written notification must be submitted to the IDEM at least ten (10) working days prior to any future planned renovation/demolition activities.**

If the intent is to remove ACMs prior to or during demolition activities, it should be done so using asbestos abatement contractors licensed to work in the State of Indiana. If any identified non-friable ACM materials are to be left in place during renovation/demolition activities, they should not be disturbed or otherwise made friable. Heartland recommends that a licensed abatement contractor be utilized to remove the RACM identified prior to the renovation/demolition of the building.

5.0 DISCLAIMER AND SIGNATURE PAGE

This environmental report was prepared in accordance with generally accepted principles and practices in the environmental consulting field. Conclusions and recommendations expressed herein were developed from site evaluation and limited research, and we are not responsible for unrecorded data pertaining to this site. Heartland makes no warranties, expressed or implied, as to the fitness or merchantability of said property for any particular purpose, and we are not responsible for independent conclusions or opinions made by others based on this report.

Reasonable efforts were made to identify suspect ACM within the facility inspected. This inspection was performed using “non-destructive” sampling methods. The manner of the inspection did not compromise the structural integrity of the buildings or endanger the safety of sampling personnel or other contractors/occupants.

Additionally, recommendations made as part of this report are for use by the City and should not be construed as a project design for the removal of ACM that may be removed as a consequence of this report.

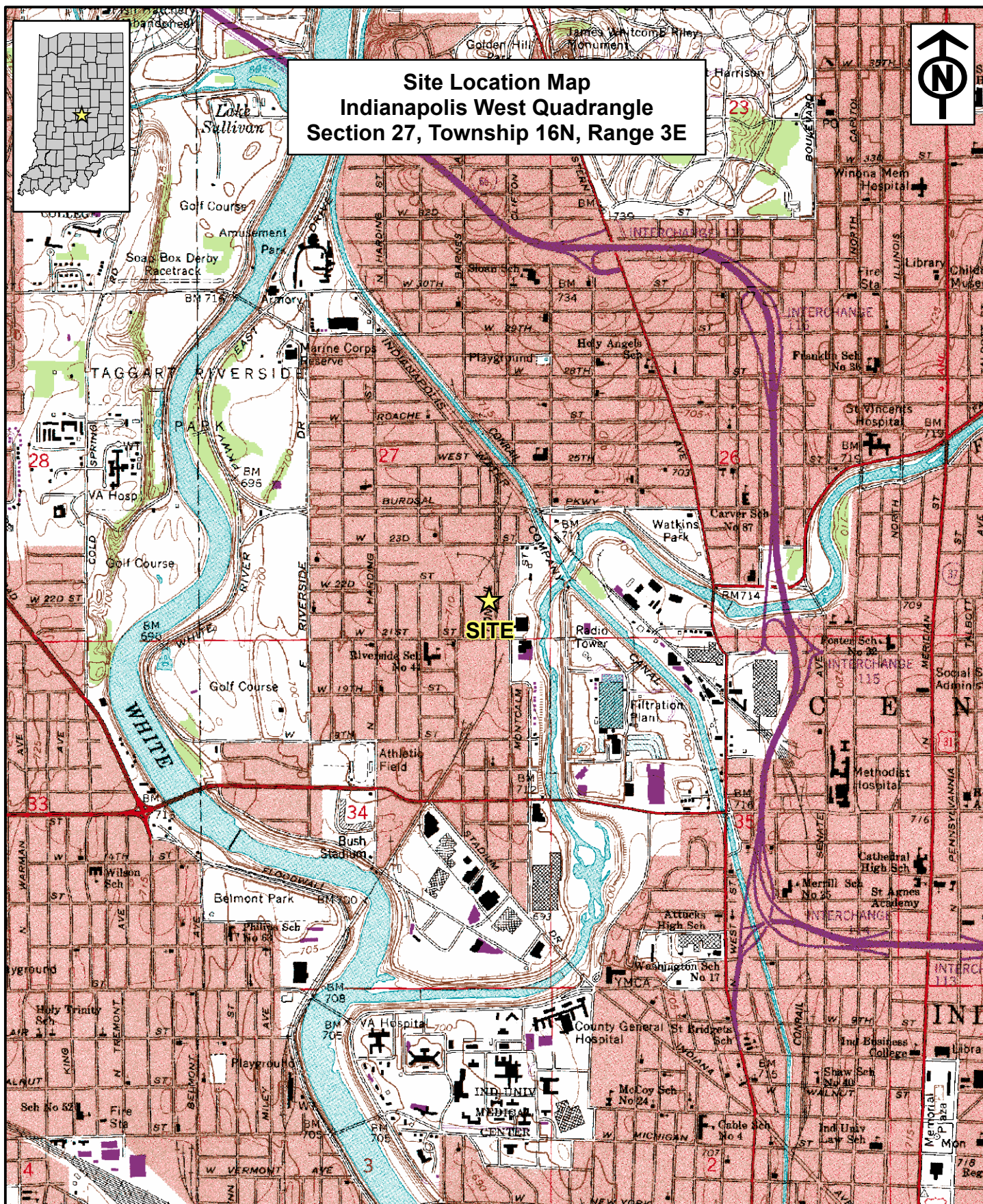
If you should have questions regarding this report, please contact Heartland at 574-289-1191 or Blue Sky at 812-381-9061.

Sincerely,

A handwritten signature in blue ink, appearing to read 'N. Vijay', with a stylized flourish extending to the right.

Nivas R. Vijay, CHMM
Project Manager
Indiana Asbestos License # 197004016

FIGURES

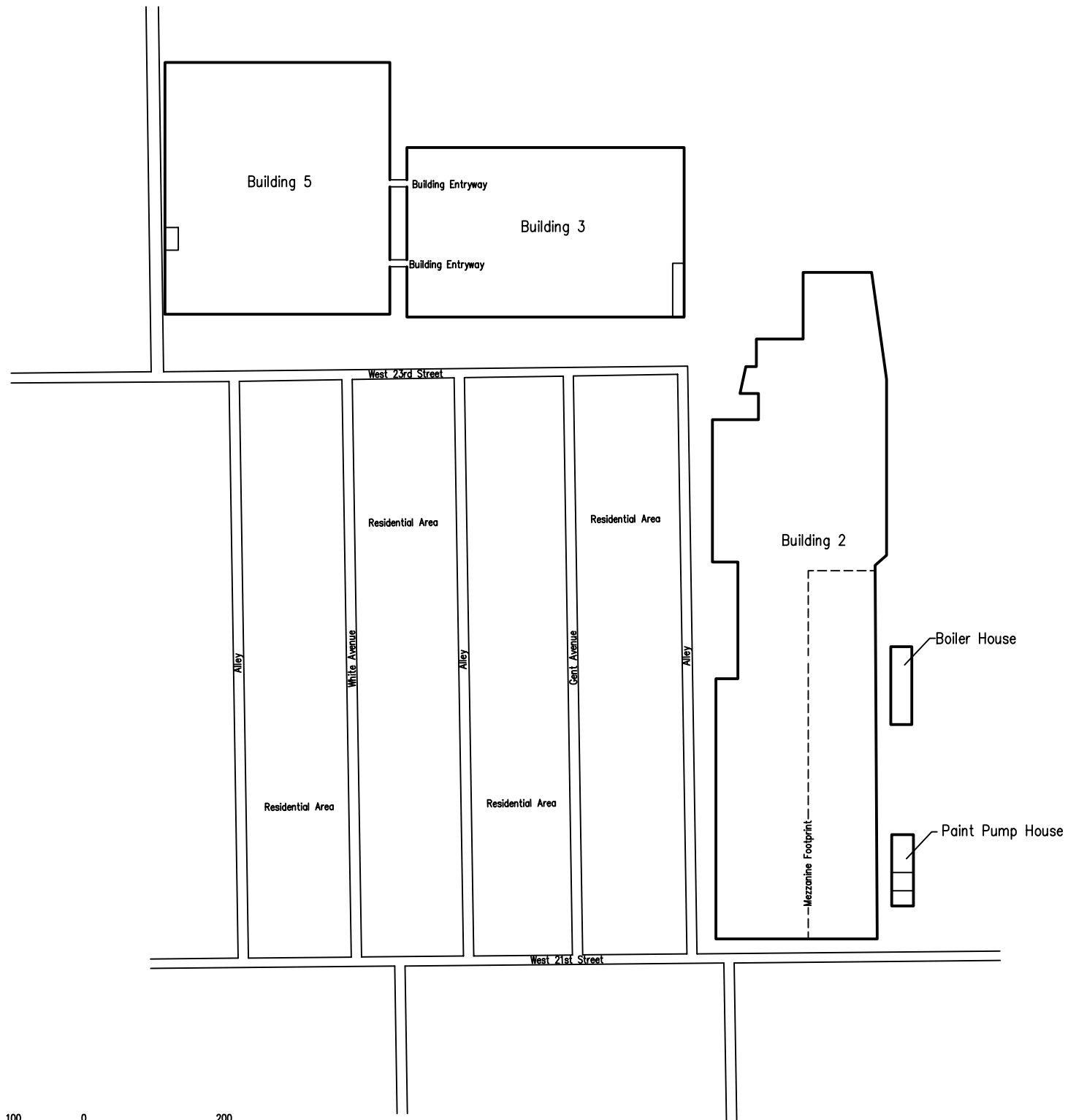


Heartland Environmental Associates, Inc.
 3410 Mishawaka Avenue, South Bend, Indiana 46615

FIGURE 1
SITE LOCATION MAP

FORMER CARRIER/BRYANT MANUFACTURING CORP.
1100 WEST 21ST STREET & 1139 23RD STREET
INDIANAPOLIS, INDIANA

Date:
 12/27/10
 Scale:
 1"=2,000'
 Drawn By:
 NV

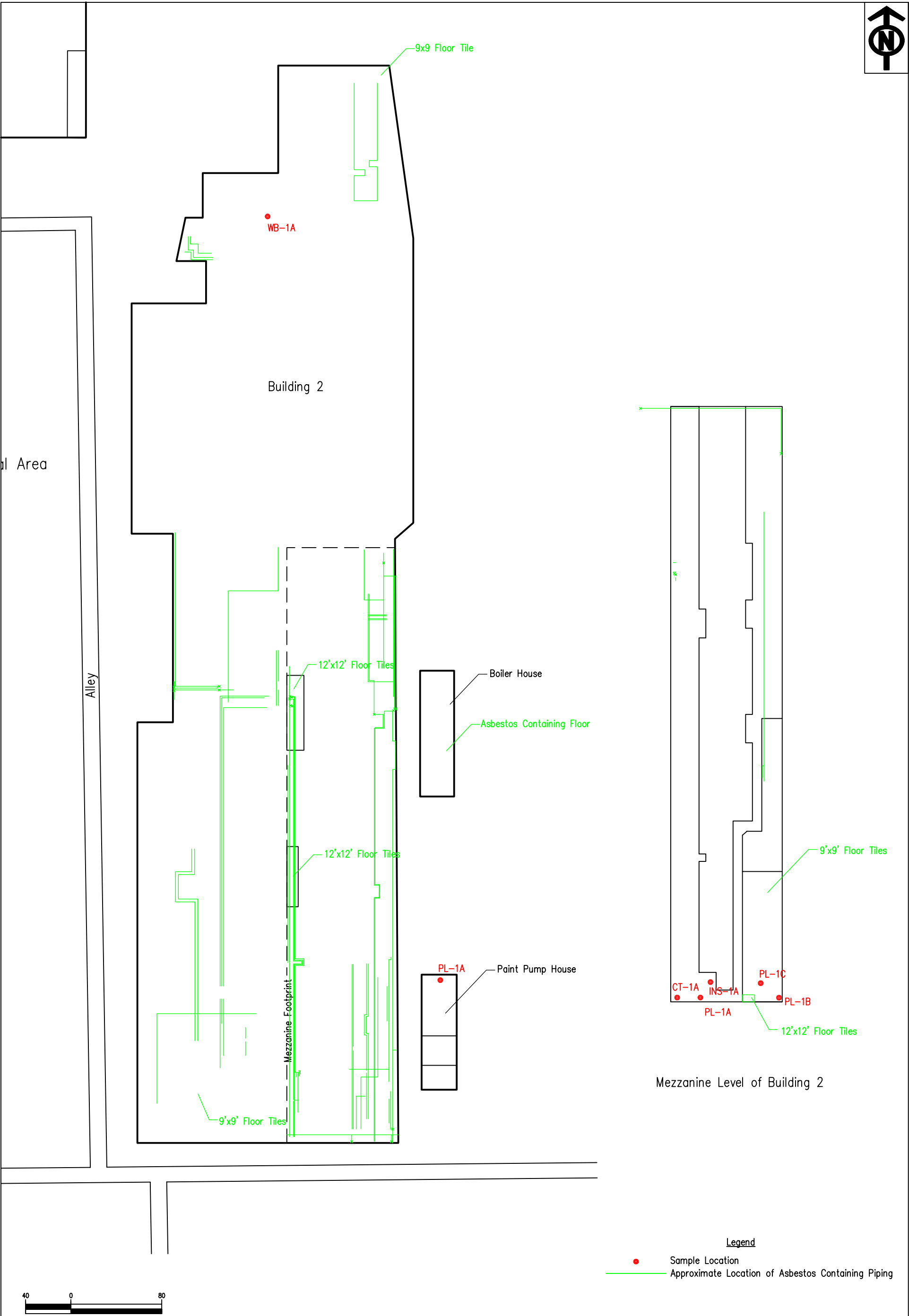


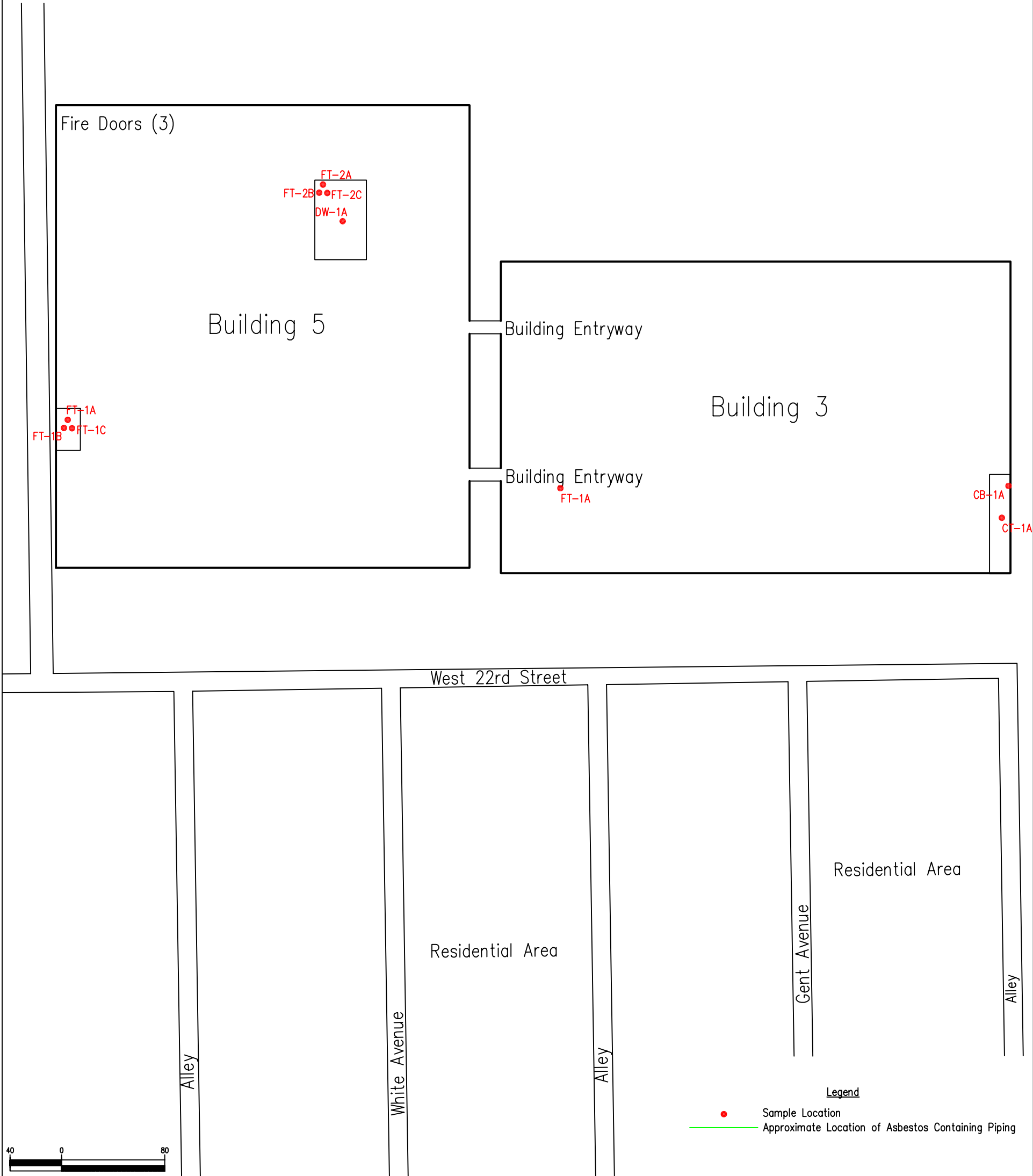
Heartland Environmental Associates, Inc.

FIGURE 2
SITE MAP

FORMER CARRIER/BRYANT MANUFACTURING CORP.
1100 WEST 21st STREET & 1139 23rd STREET
INDIANAPOLIS, INDIANA

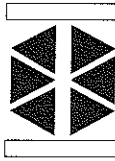
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12/15/10
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NV





APPENDIX A

Certificate of Asbestos Accreditation



Environmental Management Institute

5610 Crawfordsville Road, Suite 15, Indianapolis, Indiana 46224-3714

317/248-4848 • 800/488-8842 • FAX 317/248-4846

www.envtlmgmt.org

This confirms that

Nivas Vijayaraghavan

Completed the Required Refresher Training for
Asbestos Accreditation Under TSCA Title II
and has
passed with a Score of 70 or Greater the Examination for

Asbestos Building Inspector

Course Date
August 5, 2010

Examination Date
August 5, 2010



Jack E. Leonard, President

Certificate: IN(R) 6698

Expires: August 5, 2011

Approved by::

Illinois Department of Public Health
Indiana Department of Environmental Management

APPENDIX B

Standard Operating Procedures for Asbestos Sampling



Standard Operating Procedures Asbestos Building Inspection and Sampling Protocol

1.0 PURPOSE

Asbestos inspections are completed to determine the presence of ACM in accordance with the National Emission Standard of a Hazardous Air Pollutant (NESHAP) for Asbestos, 40 CFR 61 Subpart M, and 326 IAC 14-10, Emission Standards for Asbestos; Demolition and Renovation Operations. Samples, if necessary, are collected in general conformance with the procedures outlined in the Asbestos Hazard Emergency Response Act of 1986 (AHERA). In accordance with the United States Environmental Protection Agency (USEPA) 40 CFR 763.83 Subpart E definitions, the three types of ACM are: thermal system insulation, surfacing materials, and miscellaneous materials.

2.0 SAMPLING STRATEGIES

The sampling strategy for any suspect material is dependent upon the application, area covered and apparent uniformity and homogeneity of the application. Each suspect material is placed into a grouping referred to as a homogeneous area. The homogeneous area is all material of the same type, color, texture, and estimated age of installation. Suspect materials are classified based on three (3) basic categories, thermal system insulation (TSI), surfacing material (S), and miscellaneous material (Misc).

TSI is material used to prevent heat loss or gain, or prevent condensation and includes pipe insulation, valve and fitting insulation, boiler insulation, breeching insulation, and tank insulation. Surfacing materials are sprayed on, troweled on, or otherwise applied to a surface such as acoustical plaster on ceilings or fireproofing on structural members or decking, or on surfaces for fireproofing purposes.

Miscellaneous or other materials are those that are not classified into the categories of TSI or surfacing, such as ceiling tile, floor tile, roofing felt, cove base and mastic. Upon defining homogeneous areas, each area is sub-divided into sectors. Sectors are randomly chosen from which a sample of the material is collected (per the U.S. EPA's "Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials", dated October 1985). The number of samples collected depends upon the type of material (TSI, S, Misc) and amount according to the following chart based on OSHA regulations (29 CFR 1926.1001).

Type of Material	Amount	Number of Samples
Surfacing	<1,000 SF	Minimum of 3
	1,000 – 5,000 SF	Minimum of 5
	> 5,000 SF	Minimum of 7
TSI	<6 LF/SF	1
	>6 LF/SF	Minimum of 3
Misc/Other	Any	Sufficient to Determine ACM/Not-ACM (generally 3/5/7 as above for surfacing)
Note: LF = Linear Feet SF = Square Feet		

At any time, a building inspector can elect to assume the material is asbestos containing and thereby forego sampling requirements for that homogeneous area.

Collection of samples is accomplished by carefully extracting a portion of the material (1 – 10 cm³) to include all layers present in the material. The samples are then numbered and labeled with a unique number and delivered to the laboratory for analysis by Polarized Light Microscopy.

3.0 DETERMINATION OF NON-ASBESTOS CONTAINING MATERIALS

Sampling and analysis of suspect asbestos materials is performed in an attempt to eliminate materials as ACM. Suspect materials are primarily determined by knowledge of the uses of asbestos: heat insulation, fire retardant, electric systems insulator, chemical resistant material, and many building materials that required durability. Elimination of a material as ACM for the purposes of maintenance, renovation, or demolition work may only be performed by an accredited asbestos building inspector through a building inspection and assessment procedure. Elimination of a material may occur if (1) the material is visibly non-ACM (only really applies to fiberglass and rubberized materials); (2) documentation illustrates that the materials used are non-ACM; or (3) sampling and analysis are performed. According to OSHA's Construction Standards, negative analytical results for a minimum of three (3) samples are required to conclusively determine a material to be non-ACM. All three (3) of these samples must be determined to be visually the same material from the same homogeneous area (same color, texture, and estimated date of installation). A "same" material is primarily identified as a material whose appearance and application are the same. Materials cannot be judged as being in the same homogeneous area, even if these materials appear the same and are applied the same unless the time on installation is also the same. The materials must have been installed or constructed at the same time, or purchased as the same material at the same time, but installed at different times. If date of construction or installation is in doubt more than one (1) homogeneous area must be determined.

APPENDIX C

Laboratory Certificates of Analysis

**ANALYSIS OF SUSPECT ASBESTOS CONTAINING
BUILDING MATERIALS**

FOR:

**HEARTLAND ENVIRONMENTAL ASSOCIATES, INC
3410 MISHAWAKA AVE
SOUTH BEND, IN 46615**

LOCATION:

**FORMER CARRIER/BRYANT FACILITY
100 W 21ST STREET
INDIANAPOLIS, IN**

**ACM ENGINEERING & ENVIRONMENTAL SERVICES
PROJECT#: 17231**

DATE OF REPORT:

DECEMBER 9, 2010

PREPARED BY:

**ACM ENGINEERING & ENVIRONMENTAL SERVICES
26598 U.S. 20 WEST
SOUTH BEND, IN 46628**

NVLAP LAB CODE: 101977

INTRODUCTION:

In December 2010, ACM Engineering & Environmental Services received bulk samples of suspect asbestos containing building material from Heartland Environmental Services. These are to be analyzed by ACM Engineering & Environmental Services for possible asbestos content.

THE REPORT:

The attached report quantifies the fibrous materials found in each sample submitted for analysis. A complete fibrous analysis of samples is given for each sample followed by a breakdown analysis of any sub-samples for heterogeneous material.

The first column is the client sample identification.

The second column is the laboratory sample number. The laboratory number for the overall sample analysis is a digit number. The laboratory number followed by a letter designation (A,B,C. etc.) indicates a sub-sample analysis.

The third column is the sample identification, which indicates whether the sample is homogeneous or heterogeneous, the color of the sample, and the physical description (cementitious, fibrous, cloth, etc.)

The fourth column indicates the types and percentages of asbestos identified in the sample or sub-sample.

The fifth column indicates the types and percentages of non-asbestos identified in the sample or sub-sample.

The sixth column indicates the types and percentages of non-asbestos, non-fibrous material in the sample or sub-sample.

The seventh column indicates the types and percentages of non-asbestos fibrous material in the sample or sub-sample. Fibrous material will not necessarily total 100% of the sample.

There will be dashes (---) in each column when nothing is detected.

METHOD:

All analyses and quantifications are performed in accordance with the U.S. Environmental Protection Agency's "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116.

The method utilizes stereoscopic examination of the bulk samples, as well as utilizing the polarized light microscope and the central stop dispersion staining method.

If applicable, please be advised that the Stereo Scope/PLM methods have limitations regarding floor tile analysis for asbestos content. Historically, the production of floor tile has included the grinding of asbestos into submicroscopic portions. Therefore, this method of analysis may produce incorrect results for tests of floor tile which produce negative finding for asbestos.

PAGE 2

Gross samples are examined under a 10X or 20X stereoscope where homogeneity (need for sub-samples), texture and /or any other distinguishing characteristics are determined.

Sub-samples are prepared if needed. Any fibrous material is mounted in high dispersion oil for further microscope examination utilizing polarized light microscopy. Any possible asbestos fibers are analyzed for morphology, color and pleochroism, index of refraction parallel and perpendicular to elongation, birefringence, extinction characteristic and sign of elongation, and any other distinguishing characteristics observed.

To determine the refractive index, the central stop dispersion staining method is used, as well as matching with refractive index oil and using light matching the sodium D line wavelength. Identification of non-asbestos species is less rigorous, as they are of secondary interest.

The percentage of asbestos and other fibrous materials are then determined according to sample area coverage and thickness. The limit of qualification is one percent (1%). The above is recorded on the laboratory analysis sheet and maintained for three years.

The error involved for reported percentages of fibrous is 100% error for 1% to 5%, 50% error for 5% to 20%, and 25% error for 20% to 100%. All percentages will be reported in a range indicating error or a single value, in which case the above error should be applied. When the value 1% or greater is reported this indicates asbestos is present in the sample.

ASBESTOS CHARACTERIZATION:

The features of the various forms of asbestos are as follows:

CHRYSOTILE: Thin fibers and fiber bundles with both straight and wavy sections. The ends of bundles tend to be frayed. Sign of elongation is positive, refractive indices are 1.493-1.560 (alpha) and 1.668-1.717 (gamma), and birefringence of 0.009-0.016. It is commonly referred to as white asbestos.

AMOSITE: Straight thin single fibers and bundles of such fibers usually with cleanly broken ends on individual fibers, positive sign of elongation, refractive indices of 1.653-1.696 (alpha) and 1.655-1.729 (gamma), and birefringence of 0.020-0.033. Fibers exhibit parallel extinction.

CROCIDOLITE: Similar in morphology to amosite, but is distinguished by negative sign of elongation, blue to blue-green pleochroic coloration, refractive indices of 1.654-1.701 (alpha) and 1.668-1.717 (gamma), and birefringence of 0.009-0.016. It is commonly referred to as blue asbestos.

ANTHOPHYLITE: Similar in morphology to amosite, but has refractive indices of 1.596-1.652 (alpha) and 1.615-1.676 (gamma), anthophyllite fibers show parallel extinction and positive sign of elongation.

PAGE 3

TREMOLITE/ACTINOLITE SERIES:

Transparent, elongated furrowed prisms, usually with uneven, jagged ends and smooth sides, with oblique (0-20 degree) to parallel extinction and positive elongation; refractive indices are 1.599-1.668 (alpha) and 1.622-1.688 (gamma) and birefringence is 0.020-0.028.

SAMPLE RETENTION:

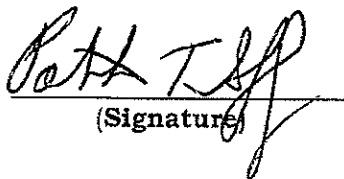
Samples will be retained for 6 months unless otherwise instructed. After this period, the sample(s) will be disposed of appropriately. Upon written request, the samples will be returned by mail or delivery for a nominal fee to cover postage and handling. There would be no charge for samples picked-up at ACM Engineering & Environmental Services.

DISCUSSION AND RECOMMENDATIONS:

In order to reduce the risk of introducing asbestos fibers into the air, care should be taken not to disturb the asbestos containing building materials. If renovation, demolition or other activities might disturb known asbestos containing building materials, a reputable asbestos consultant should be contacted to help effectively design and implement an asbestos management program.

Report prepared by:

Patrick T. Griffin


(Signature)

ACM Engineering & Environmental Services
President/CEO

Analysis of Suspect Asbestos Containing Building Materials

CLIENT: HEARTLAND ENVIRONMENTAL ASSOCIATES ANALYTICAL METHOD: EPA/600/R-93/116
3410 MISHAWAKA AVE
SOUTH BEND, IN 46615 NVLAP LAB CODE #: 101977

CLIENT PROJECT: FORMER CARRIER/BRYANT FACILITY MATRIX: BULK

DATE OF SAMPLE: 12/6-12/7/2010 DATE OF ANALYSIS: 12/08/10

SAMPLE SITE: 100 W 21 ST STREET ACM PROJECT #: 17231
INDIANAPOLIS, IN

CLIENT SAMPLE NUMBER	LAB SAMPLE NUMBER	SAMPLE IDENTIFICATION	ASBEST	CELL	NON FIB NON ACBM	FIB NON ACBM
B-2/ CT1A	1013281	WHITE CEILING TILE	-----	49%	-----	51% G
B-2/INS-1	1013282	WHITE INSULATION	-----	-----	-----	100% G
B-2/PL-1A	1013283	WHITE PLASTER	28% C	4%	68%	-----
B-2/PL-1B	1013284	GREY PLASTER	-----	-----	88%	12% O
B-2/PL-1C	1013285	WHITE PLASTER	27% C	-----	73%	-----
B-2 ROOF-1	1013286	ROOFING MATERIAL	-----	41%	59%	-----
B-2/WB-1A	1013287	WALLBOARD	39% C	36%	25%	-----
B-3/CB-1A	1013288	BROWN COVE BASE	-----	-----	100%	-----
B-3/CB-1A	1013288A	TAN MASTIC	-----	-----	100%	-----
B-3/CT-1A	1013289	WHITE CEILING TILE	-----	51%	-----	49% G
B-3/FT-1A	1013290	BROWN FLOOR TILE	-----	-----	100%	-----
B-3/FT-1A	1013290A	BLACK MASTIC	-----	4%	96%	-----
B-3/PIPE-1	1013291	CEMENT PIPE	37% C	-----	63%	-----
B-5/DW-1A	1013292	DRYWALL	-----	3%	97%	-----
B-5/FT-1A	1013293	BROWN FLOOR TILE	-----	-----	100%	-----
B-5/FT-1A	1013293A	BLACK MASTIC	3% C	-----	97%	-----
B-5/FT-1B	1013294	BROWN FLOOR TILE	-----	-----	100%	-----
B-5/FT-1B	1013294A	BLACK MASTIC	3% C	-----	97%	-----
B-5/FT-1C	1013295	BROWN FLOOR TILE	-----	-----	100%	-----
B-5/FT-1C	1013295A	BLACK MASTIC	3% C	-----	97%	-----
B-5/FT-2A	1013296	BROWN FLOOR TILE	-----	-----	100%	-----
B-5/FT-2A	1013296A	BLACK MASTIC	3% C	-----	97%	-----

ACM RECOMMENDS POINT COUNTING ANALYSIS ON ALL BULK SAMPLES

WITH LESS THAN 10% (< 10%) ASBESTOS CONTENT

MICROSCOPIST:

Larry Malone

DATE: 12/9/10

Analysis of Suspect Asbestos Containing Building Materials

CLIENT: HEARTLAND ENVIRONMENTAL ASSOCIATES ANALYTICAL METHOD: EPA/600/R-93/116
3410 MISHAWAKA AVE
SOUTH BEND, IN 46615 NVLAP LAB CODE #: 101977

CLIENT PROJECT: FORMER CARRIER/BRYANT FACILITY MATRIX: BULK

DATE OF SAMPLE: 12/6-12/7/2010 DATE OF ANALYSIS: 12/08/10

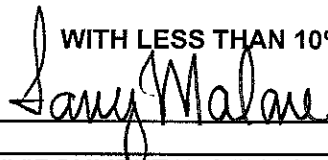
SAMPLE SITE: 100 W 21 ST STREET ACM PROJECT #: 17231
INDIANAPOLIS, IN

CLIENT SAMPLE NUMBER	LAB SAMPLE NUMBER	SAMPLE IDENTIFICATION	ASBEST	CELL	NON FIB NON ACBM	FIB NON ACBM
B-5/FT-2B	1013297	BROWN FLOOR TILE	-----	-----	100%	-----
B-5/FT-2B	1013297A	BLACK MASTIC	3% C	-----	97%	-----
B-5/FT-2C	1013298	BROWN FLOOR TILE	-----	-----	100%	-----
B-5/FT-2C	1013298A	BLACK MASTIC	3% C	-----	97%	-----
B-5/ROOF-1	1013299	ROOFING MATERIAL	-----	72%	28%	-----
B-5 ROOF-2	1013300	ROOFING MATERIAL	-----	74%	26%	-----
B-PP-PL-1A	1013301	PLASTER	-----	-----	100%	-----
B-PP-ROOF-1	1013302	ROOFING MATERIAL	-----	72%	28%	-----

ACM RECOMMENDS POINT COUNTING ANALYSIS ON ALL BULK SAMPLES

WITH LESS THAN 10% (< 10%) ASBESTOS CONTENT

MICROSCOPIST:



DATE:

12/9/10

Analysis of Suspect Asbestos Containing Materials

ACM ENGINEERING & ENVIRONMENTAL SERVICES PROJECT NO.: 17231

DESCRIPTION OF ANY PROBLEMS ENCOUNTERED IN THE SAMPLE ANALYSIS: None

COMPONENTS DESCRIPTION:

ASBESTOS MATERIALS

ACBM = ASBESTOS CONTAINING BUILDING MATERIAL
C = CHRYSOTILE
A = AMOSITE
CR = CROCIDOLITE
AN = ANTHOPHYLITE
AC = ACTINOLITE
T = TREMOLITE
---- = NO ASBESTOS DETECTED

NON-ASBESTOS MATERIALS

CELL = CELLULOSE
G = FIBROUS GLASS
M = MINERAL WOOL
S = SYNTHETICS
H = HAIR
CO = COTTON
O = OTHER
CF = CERAMIC FIBERS
M = MICA

NON-FIB NON-ACM = NON FIBROUS NON ACBM
FIB NON ACM = FIBROUS NON ACBM

NOTES: FIBROUS QUANTITIES DO NOT NECESSARILY ADD UP TO 100%,
REMAINING QUANTITIES ARE COMPOSED OF NON-FIBROUS ROCKS,
BINDERS AND MISC. MATERIALS.

THIS REPORT MUST NOT BE USED BY THE CLIENT TO CLAIM PRODUCT
ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE U.S. GOVERNMENT.

THIS REPORT RELATES ONLY TO THE ITEMS ABOVE.

THIS TEST REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN CONSENT OF ACM ENGINEERING & ENVIRONMENTAL
SERVICES.

ACM ENGINEERING & ENVIRONMENTAL SERVICES DOES NOT DEVIATE FROM
THE TEST METHOD DESCRIBED IN THIS REPORT.

ACM Engineering & Environmental Services, Inc.

26598 US 20 West
South Bend, Indiana 46628
Phone (574) 234-8435
Fax (574) 234-6800

Suspect Asbestos Containing Building Material Sampling - Chain-of-Custody - Analysis Request Form

ACM Project #

17231

Page 1 of 2

Client: Heartland Environmental Associates, Inc.
Billing Address: 3410 Mishawaka Ave
Billing City, State, Zip: South Bend, IN 46615
Report Results To: Naras Vijay (nars@heartlandenv.com)
Sampling Date: 12/6/10 Sampled By: N. Vijay



NVLAP

Site Location: Finance Center Bypass Facility
Address: 1100 W. 21st St., Indianapolis, IN
Type of Project: Asbestos Inspection
Requested Turn Around Time: Standard
Reference Number: 5077-10-02:02

Sample Identification	Sample Type (Bulk, Wipe, Other)	Sample Description	Sample Location	Requested Analysis; Instructions / Comments
B-2/CT-1A	Bulk	Ceiling Tile	Building 2	PLM (Analytical Positive)
B-2/INS-1		Wall Insulation		
B-2/PL-1(A-C)		Plaster		
B-2/Roq-1		Roofing Material		
B-2/WB-1A		Wall board		
B-3/CB-1A		Ceiling Tile + Hardware	Building 3	
B-3/CT-1A		Ceiling Tile		
B-3/FT-1A		Floor Tile + Hardware		
B-3/Pipe-1		Cement Pipe		
B-5/DW-1A		Drywall	Building 5	
B-5/FT-1(A-C)		Floor Tile + Hardware		
B-5/FT-2(A-C)		Floor Tile + Hardware		

Submitted by: (sign) [Signature] (print) Naras Vijay Date Submitted: 12/8/10 11:25
Received by: (sign) [Signature] (print) Jason Gorsuch Date and time received: 12/8/10 11:25
(For lab use only) Samples processed by: Garay Wallace Date: 12/8/10 Time: From am/pm to 200 am/pm

17231

Suspect Asbestos Containing Building Material Sampling - Chain-of-Custody - Analysis Request Form



Site Location: Former Carrier Boyard facility
Address: Indianapolis, IN
Type of Project: Abandon Demolition
Requested Turn Around Time: Standard
Reference Number: 5077-10-02-02

Submitted by: (sign) [Signature] (print) Nolas Vijay Date Submitted: 12/8/10 11:25

Received by: (sign) [Signature] (print) Jason Genser Date and time received: 12/8/10 11:25

(For lab use only) Samples processed by: Jamy Malone Date: 12/8/10 Time: From am to 200 am/pm

POINT COUNTING ANALYSIS OF SUSPECT ASBESTOS CONTAINING BUILDING MATERIALS

CLIENT: HEARTLAND ENVIRONMENTAL ASSOCIATES
3410 MISHAWAKA AVE
SOUTH BEND, IN 46615

ANALYTICAL METHOD: EPA 40CFR61
PT. 763 SUBPART E, APPENDIX E
POLARIZED LIGHT MICROSCOPY - POINT COUNTING

CLIENT PROJECT: FORMER CARRIER/BRYANT FACILITY

NVLAP LAB CODE #: 101977

DATE OF SAMPLE: 12/6-12/7/10

DATE OF ANALYSIS: 12/16/10

SAMPLE SITE: 100 W 21ST ST
INDIANAPOLIS, IN

ACM PROJECT #: 17231

CLIENT SAMPLE NUMBER	LAB SAMPLE NUMBER	# OF SLIDES	ASBESTOS CONCENTRATION BY POINT COUNTING	AVERAGE CONCENTRATION OF ASBESTOS PERCENTAGE
B-5/FT-1A	1013293A	8	4/400	<1% ASBESTOS
B-5/FT-2A	1013296A	8	2/400	<1% ASBESTOS

MICROSCOPIST:

Larry Malone

DATE:

12/17/10